

We Claim:

1. A triple layer industrial fabric having a paper side (PS) layer and a machine side (MS) layer comprising
5 polymeric warp and weft yarns woven to a repeat pattern wherein:

(i) all of the warp yarns are arranged as vertically stacked pairs;

10 (ii) all of the weft yarns comprise pairs of intrinsic weft binder yarns each having a first and second member each of which contributes to the structure of both the PS and the MS layers of the fabric and binds together the PS and MS layers; and

15 (iii) each pair of intrinsic weft binder yarns forms an unbroken weft path in both the PS layer and the MS layer whereby when either the first or second member passes from the PS layer to the MS layer, the other member of the pair passes from the MS layer to the PS layer at an exchange point located between at least one common pair of warp 20 yarns.

2. A triple layer industrial fabric as claimed in Claim 1, wherein the PS layer has an exposed PS surface and the MS layer has an exposed MS surface; and wherein

25 (i) in a first portion of the repeat pattern, the first member is exposed in the PS surface over a preselected number (N1) of PS warp yarns while the second member is exposed in the MS surface over a preselected number (N2) of MS warp yarns; and

30 (ii) in a second portion of the repeat pattern the first member is exposed in the MS surface over a preselected number (M1) of MS warp yarns while the second

member is exposed in the PS surface over a preselected number (M2) of PS warp yarns.

3. A triple layer industrial fabric as claimed in claim 2,
5 wherein the value of N1 is equal to the value of N2, and
the value of M1 is equal to the value of M2.

4. A triple layer industrial fabric as claimed in claim 2,
wherein the value of N1 is equal to the value of M2, and
10 the value of N2 is equal to the value of M1.

5. A triple layer industrial fabric as claimed in claim 2,
wherein the values of each of N1, N2, M1 and M2 are equal.

15 6. A triple layer industrial fabric as claimed in claim 1
wherein for each unit area, viewed substantially
perpendicularly to the PS surface of the PS layer or the MS
surface of the MS layer, an open space projected through
the fabric after a heatsetting process has an area in a
20 range of 35% to 50% of the unit area.

7. A triple layer industrial fabric as claimed in claim 1
wherein the fabric after a heatsetting process has an air
permeability in a range of 800 to 1200 cubic feet per
25 minute per square foot.

8. A triple layer industrial fabric as claimed in claim 7
wherein the fabric after a heatsetting process has an air
permeability in a range of 900 to 1100 cubic feet per
30 minute.

9. A triple layer industrial fabric as claimed in claim 1

wherein the polymeric yarns are made from at least one material selected from the group polyetheretherketone, polyphenylene sulphide, polyethylene terephthalate, and polycyclohexamethalyne terephthalate, acid modified.

5

10. A triple layer industrial fabric as claimed in claim 1 wherein the PS surface of the PS layer of the fabric has a polymeric resinous coating.